

Pavement Preservation Resources

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Topics to be Covered

- **California Pavement Preservation (CP2) Center**
- **Annual Pavement Preservation conference**
- **Caltrans Industry Joint Training efforts**
- **Benefits of pavement preservation**
- **Summary**

CP2 Center Update

- Caltrans established the California Pavement Preservation Center on July 1, 2006
- Purpose is to accommodate the needs for pavement preservation services to governmental agencies and industry



CENTER OBJECTIVES

- **Serve as a technical resource for pavement preservation activities within the state of California.**
- **Educate others about the benefits of pavement preservation in partnership with the Caltrans and industry. This would involve educational programs at the university as well as distant learning opportunities.**
- **Enhance pavement preservation knowledge through research and training.**
- **Advise and assist others to establish a pavement preservation program.**



CENTER'S GOALS/SERVICES

- **Become a credible 3rd party for Caltrans, local agencies and industry**
- **Experts in evaluation of new products and innovation in pavement preservation**
- **Partners in conducting pavement preservation research and implementing practical findings**
- **Promoting useable pavement preservation tool**



PARTNERSHIPS/RESOURCES



- **Caltrans**

- **Pavement Preservation Task Group (PPTG)**



- **Western Pavement Preservation Partnership (WPPP)**



- **Federal Highway Administration (FHWA)**



- **National Center for Pavement Preservation (NCPP)**



- **American Association of State Highway Transportation Officials (AASHTO)**



- **Foundation for Pavement Preservation (FP2)**



OTHER PARTNERS & POTENTIAL PARTNERS

- **CIWMB**
- **Industry and Local agencies (MSA, APWA, MTC, CCSA)**
- **California State legislature**
- **US House transportation and infrastructure committee**



ASPHALT RUBBER USAGE GUIDE



Prepared by

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MEASURES OF SUCCESS

- **Quality of educational & outreach programs**
- **Technical assistance provided**
- **Implementation of research and new technologies**
- **Successful Internship program**
- **Improvements in the pavement preservation process**



INITIAL WORK PLAN – A PARTNERING PROCESS

- **Strategic planning meeting held August 29-30, 2006**
- **Identified the major issues/challenges facing the pavement preservation industry in California**
- **Developed a practical vision for the center for the first 3 years**
- **Prioritized issues based on need and value added**
- **Charted a roadmap for the Center**



TASK 1: DETERMINE AND DEMONSTRATE BENEFITS OF PAVEMENT PRESERVATION

- **Actions**
 - Track performance of existing strategies
 - Determine/document benefits
 - Conduct LCCA
- **Deliverables**
 - White paper for decision makers
 - Report to document benefits of pavement preservation



TASK 2: PROVIDE TRAINING AND EDUCATION

- **Actions**

- **Develop presentations for decision makers**
- **Develop training sessions on the importance of pavement preservation**
- **Develop training sessions on the MTAG**
- **Assist Caltrans in planning & conducting an annual conference on pavement preservation**

- **Deliverables**

- **Training sessions and workshops on the above**
- **Annual conference (www.cp2info.org/conference)**



TASK 3: IMPROVE PAVEMENT PRESERVATION PERFORMANCE

■ Actions

- Update the MTAG for Flexible and Rigid pavements
- Improved consistency through improved QC/QA
- Define industry standards for various treatments
- Update specifications to improve product quality



■ Deliverables

- Updated guides and associated training
- Improved inspections procedures (guides and checklists)
- Updated trigger values for selecting treatments
- Develop performance curves for treatments
- Updated specifications for treatments

TASK 4: ENCOURAGE INNOVATION AND TECHNOLOGY TRANSFER

▪ Actions

- Streamline the process for implementing innovation and new products
- Work with industry to evaluate new technologies and processes
- Develop/evaluate new performance related tests
- Encourage T2 through dissemination of information



▪ Deliverables

- Improved process for innovation
- Reports/memos/ research notes on new technologies, materials, processes and tests
- Technology transfer through various media.

TASK 5: PROVIDE TECHNICAL ASSISTANCE

■ Actions

- Assist with failure investigations and if necessary provide expert testimony to support Caltrans
- Conduct pavement reviews on new products and others
- Provide technical consultation on pavement preservation



■ Deliverables

- Reports on failures and pavement reviews
- Help desk on pavement preservation

TASK 6: PROMOTE EFFECTIVE PAVEMENT PRESERVATION

■ Actions

- Develop information booth on pavement preservation
- Development of fact sheets and brochures
- Participation at agency and industry meetings

■ Deliverables

- Participation at major agency and industry meetings
- Marketing materials (newsletter, fact sheets, brochures, advisory guides)
- Development and delivery of presentations
- Maintaining the website



ANNUAL PAVEMENT PRESERVATION CONFERENCE

- **Conference Initiated in 2006**
- **Held every year, alternating between northern and southern California**
 - **2006- Diamond Bar**
 - **2007- Union City**
 - **2008- Newport Beach**



www.cp2info.org/conference



Planning for Conferences

- **PPTG effort**
- **Members include representatives from**
 - **Caltrans**
 - **Industry**
 - **FHWA**
 - **Local agencies**
 - **Academia**

Topics Covered

- **Importance of pavement preservation**
- **Integrating pavement preservation into PMS**
- **Strategy selection**
- **Maintenance techniques**
- **Case histories**
- **Lessons learned**
- **And more**

Measures of Success

- **Conference attendance exceeded 300 in the first 2 years**
- **Attendees included representatives of all participating groups**
- **Presentations are posted on the conference website and used**
- **Evaluations have been very good**
- **Plans are underway for the 2008 conference**

Caltrans Industry Joint Training

- **Training modules are being developed for both the flexible and rigid MTAGs**
- **Modules are being developed jointly by Industry, MACTEC and the Center**
- **Training will begin in winter 2008**

Topics Covered

- **Introduction to pavement preservation**
- **Materials for pavement preservation**
- **Distress appropriate for preservation**
- **Strategy selection**
- **Important surface characteristics**
- **Discussion of individual treatments**

Treatments Covered for Flexible Pavements

- Crack sealing
- Patching
- Fog seals
- Slurry and micro seals
- Chip seals
- Thin hot mix overlays
- Thin BWC
- Surface recycling
- Interlayers

Treatments Covered for Rigid Pavements

- **Crack sealing**
- **Diamond grinding**
- **Partial depth spall repair**
- **Slab replacement**
- **Dowel bar retrofit**

Benefits of Pavement Preservation

- **Purpose-identify the benefits of pavement preservation**
- **Focus initially on economic, but identify others. Is it a 6:1 benefit or something else**
- **Joint effort between the Center, UC Davis, and MACTEC**

Efforts Included

- **Collection of pavement performance data for state and local agencies using PMS data**
- **Identify the life extension if possible for the various treatments**
- **Focus on flexible pavements initially**
- **Conduct LCCA**

Preliminary Findings

- For local agencies, the LCCA savings when using pavement preservation is exceeds 20%
- For Caltrans, the LCCA savings when using pavement preservation is in the range of 20-50 %
- Additional work is needed using other sources of good PMS data

Future Work

- **This effort is to be completed by the end of 2007**
- **Reports document the savings for local agencies and Caltrans are being developed**
- **A white paper summarizing the findings will be prepared**

SUMMARY

- Caltrans established CP² Center on July 1 2006
- Partnered process used to develop work plan
- Center task orders started in January 2007
- Work is underway on all tasks



THANK YOU

The Beginning

Keeping good roads good

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